Upper and Lower Tumut 330 kV Transmission Line Realignment - ACT

Application Number: 02660

Commencement Date: 28/10/2024

Status: Locked

1. About the project

1.1 Project details

1.1.1 Project title *

Upper and Lower Tumut 330 kV Transmission Line Realignment - ACT

1.1.2 Project industry type *

Energy Generation and Supply (non-renewable)

1.1.3 Project industry sub-type

Transmission Line

1.1.4 Estimated start date *

02/06/2025

1.1.4 Estimated end date *

31/12/2075

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

This referral relates to the relocation of part of the Upper and Lower Tumut 330 kV transmission lines near their point of connection in the Australian Capital Territory (ACT), involving the construction and operation of the new lines and decommissioning and removal of the existing lines. The Upper and Lower Tumut transmission lines (Lines 1 and 7, respectively) extend from Kosciuszko National Park in New South Wales

(NSW) into the ACT, where they connect into the Canberra Substation. The new alignments would divert from near the ACT/NSW border and extend southeast, crossing the Molonglo and Murrumbidgee Rivers in the ACT then connecting into the Stockdill Substation on Stockdill Drive in western Belconnen, ACT (see **Figure 1**, **Attachment A**).

This referral relates only to the ACT portion of the works (the Proposed Action), involving:

- Construction and operation of approximately 11.3 kilometres (km) of new transmission lines, including the construction of nine new towers and four poles for Line 1, and nine new towers and five poles for Line 7
- Electrical works to connect the new Line 1 to the Stockdill Substation (replacing the existing Line 1 connection, thereby resulting in no change to the electrical configuration of the substation)
- Stringing of three additional conductors along the part of Line 3C located between the Stockdill Substation and Canberra Substation. The new conductors would extend Line 7 from the end of the new alignment adjacent to the Stockdill Substation, to the Canberra Substation where it would replace the existing Line 7 connection, thereby resulting in no change to the electrical configuration of either substation
- Decommissioning and removal of approximately 12.3 km of existing Lines 1 and 7, including:
- Removal of 18 towers from Line 1, involving complete removal of 10 tower foundations with the remaining foundations to be left in situ
- Removal of nine towers from Line 7, involving complete removal of six tower foundations with the remaining foundations to be left in situ
- Civil works associated with construction of new temporary access tracks, involving vegetation
 removal and modification, levelling, and laying of sub-base and/or metal grids for access across wet
 areas, as required. Existing tracks through farmland have been used where possible, to minimise
 impacts associated with line construction and removal works. Existing tracks for construction of the
 new alignments have been included in the defined Proposed Action Area, however, tracks to be used
 for the removal of the existing lines have not been included as these are within existing easements,
 and any vehicle movements associated with demolition would be limited in number and short term in
 nature
- Installation of temporary facilities associated with construction, including vegetation removal and modification where required, earthworks to level the site if required, and foundation preparation (excavation and/or boring, steel fabrication works and concrete pours)
- Following completion of the construction works, the temporary construction areas (new access tracks, laydown areas etc.) would be rehabilitated.

Detailed electrical and civil designs have been prepared for the Proposed Action. **Figure 2** (**Attachment A**) shows the layout of the Proposed Action once operational, including locations of the new alignments and the lines to be removed, as well as the temporary construction footprint (site access tracks, construction areas etc.).

The works would be located across a large number of land parcels (see **Table 1**, **Attachment B**). The Proposed Action Area is defined by the construction and operational footprints of the Proposed Action, as defined below.

- Construction footprint (**Figure 3**, **Attachment A**): The area that would be directly impacted by the Proposed Action during construction. This includes the impact areas of the new alignments associated with tower footings and access tracks, as well as the impact areas for demolition of the towers along the existing Lines 1 and 7. The construction footprint comprises a 50 metre (m) radius buffer around the new towers and poles, a 20 m radius buffer around the existing tower footings to be completely removed, a 60 m-wide transmission line easement, and a 10 m-wide disturbance footprint along the access tracks, and other construction areas as shown in Figure 3 (Attachment A).
- Operational footprint (**Figure 4**, **Attachment A**): The area needed for operation of the Proposed Action. This includes the tower footings and 60 metre (m)-wide transmission line easements of the

new alignments. Vegetation that grows taller than 6 m would need to be lopped from within the 60 mwide easements throughout the life of the assets.

The total Proposed Action Area is approximately 69.0 hectares (ha), comprising a maximum construction footprint of 10.9 ha and an operational footprint of 61.3 ha. Direct on-ground impacts would be limited to the 10.9 ha construction footprint. In this referral, this is referred to as the 'Disturbance Footprint'. Direct impacts have been avoided on 58.1 ha of land within the Proposed Action Area. This is referred to as the 'Avoidance Area'.

This Disturbance Footprint has been subject to extensive revision over years of ecological and heritage studies, in an effort to avoid and minimise environmental impacts wherever possible (this is discussed further in **Section 4.1.4** of this referral).

The Proposed Action Area and its surrounds primarily consist of cleared agricultural land. The majority of the Proposed Action Area supports exotic grassland and derived native grasslands. Some discrete sections of the Proposed Action Area support mature woodland and isolated paddock trees.

The Proposed Action is part of a cross-jurisdictional larger action, with transmission line construction and removal works to be undertaken in NSW as well as ACT. The Proposed Action is therefore part of a larger action, with the NSW portion of the action subject to a separate referral. This is described further in **Section 1.2** of this referral.

The purpose of the larger action is to move the existing 330 kV transmission lines out of the future urban area of West Belconnen to:

- Increase the number of affordable housing products available on the market
- Increase the number of housing blocks in general
- Improve amenity and reduce real, perceived and visual impacts on urban areas from transmission lines
- Remove lines from within the Woodstock Nature Reserve and Ginninderry Conservation Corridor (GCC) (established under the West Belconnen Strategic Assessment) allowing rehabilitation and conservation programmes to proceed, thereby reducing long term impacts on the conservation areas.

Construction of the larger action is anticipated to begin in February 2025, with operation commencing in the third quarter of 2026. This provides an 18-month construction and demolition period. The assets would operate indefinitely.

The Proposed Action is being developed by the Ginninderry Joint Venture (GJV), which is a joint venture between the ACT Government (the Territory) and Riverview Projects (ACT) Pty Ltd. For the purposes of this referral, Riverview Projects (ACT) Pty Ltd on behalf of the Ginninderry Joint Venture is considered to be the Proponent. The GJV is responsible for the development of the West Belconnen future urban area; a suburb known as Ginninderry.

Once constructed, the Proposed Action would be operated by Transgrid. Transgrid operates and manages the high voltage electricity transmission network in NSW and the ACT, which forms part of the backbone of the National Electricity Market (NEM) that enables energy trading between Australia's eastern states. Transgrid is not developing the Proposed Action and is not the Proponent for the purposes of this referral, but is heavily involved in design development as it will ultimately be responsible for operating the assets.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

Yes

1.2.5 Provide information about the staged development (or relevant larger project).

Consistent with the EPBC Act Policy Statement *Staged Developments – Split Referrals: Section 74A of the EPBC Act*, this referral is a split referral, as the referred action (the Proposed Action) is part of a larger action that is the subject of multiple referrals. The larger action has been referred in two referrals – this referral; and "Upper and Lower Tumut 330 kV Transmission Line Realignment - NSW". Both referred actions are proposed to be undertaken by the same organisation and at essentially the same time.

The larger action has been split to simplify the environmental assessment and planning requirements that relate to the various jurisdictions in which the action is located. The larger action is located on Territory Land in ACT, Commonwealth land in NSW, and non-Commonwealth land (freehold or State Government-owned) in NSW.

As described in Section 1.2 of the NSW referral, the portion of the larger action located on non-Commonwealth land in NSW is subject to the environmental assessment and development requirements of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), under which Transgrid can act as a determining authority in relation to the action. The environmental assessment and planning pathway is straightforward for actions located in a single jurisdiction, but Transgrid is uncertain as to whether it can act as a determining authority if the larger action was to be referred in its entirety under the EPBC Act. There is substantial precedence for cross-jurisdictional Transgrid projects to be referred as split referrals under the EPBC Act, hence why this process has been adopted for the larger action.

The assessments provided in the two referrals capture the full range of potential impacts of all activities associated with the larger action. All relevant impacts of the larger action have been assessed. The larger action comprises the following activities:

- Construction and operation of 12 kilometres (km) of new lines, including the construction of 10 new towers and four poles for Line 1 and 11 new towers and five poles for Line 7
- Electrical works to connect the new Line 1 to the Stockdill Substation (replacing the existing Line 1 connection, thereby resulting in no change to the electrical configuration of the substation)
- Stringing of three additional conductors along the part of Line 3C located between the Stockdill Substation and Canberra Substation
- Decommissioning and removal of a total of approximately 16.1 km of existing Lines 1 and 7, including:
 - Removal of 24 towers from Line 1, involving complete removal of 16 tower foundations with the remaining foundations to be left in situ
 - Removal of 14 towers from Line 7, involving complete removal of 10 tower foundations with the remaining foundations to be left in situ
- Civil works associated with construction of new temporary access tracks, as per the description of the Proposed Action in Section 1.2
- Installation of temporary facilities associated with construction, as per the description of the Proposed Action in Section 1.2
- Following completion of the construction works, the temporary construction areas (new access tracks, laydown areas etc.) would be rehabilitated.

Construction of the larger action is anticipated to begin in February 2025, with operation commencing in the third quarter of 2026. This provides an 18-month construction and demolition period. The assets would operate indefinitely.

The majority of works proposed as part of the other referral are associated with tower and line removal which have a limited disturbance footprint. The Proposed Action involves the majority of construction works associated with the larger action (90% of the new towers/poles and 81% of the total construction footprint).

Potential impacts on Part 3 matters under the EPBC Act can be assessed through consideration of the split referred actions consistent with the objects of the EPBC Act. In particular, the Proponent has sought to minimise impacts on the environment in all aspects of the larger action's design, not just in relation to one of the referred actions (avoidance is discussed further in **Section 4.1** in relation to listed threatened species and communities and **Section 3.3** in relation to heritage). This demonstrates the Proponent's efforts to:

- Protect the environment, especially the aspects of the environment that are matters of national environmental significance (MNES)
- Promote ecological sustainable development through the conservation and ecologically sustainable use of natural resources
- Protect and conserve heritage
- Promote a cooperative approach to the protection and management of the environment involving governments (e.g. DCCEEW, Department of Finance and the ACT Government), the community, landholders and Indigenous peoples.

Attachment C details the potential impacts on Part 3 matters associated with each referred action and the larger action in its entirety. The ACT portion of the larger action (the subject of this referral) may have potential significant impacts on superb parrot and gang-gang cockatoo, but the NSW portion of the larger action is not expected to have significant impacts on any MNES. When the impacts of the ACT and NSW referred actions are considered in combination, the larger action would only have potential significant impacts on superb parrot and gang-gang cockatoo because of the ACT action. The NSW action would not change the significant impact assessments when considered in combination with the ACT action.

The Proponent has identified avoidance opportunities and will implement mitigation and management measures across the whole of the larger action; not specifically in relation to either one of the referred actions. By splitting the larger action into the two referred actions, the ability to achieve the objects of the EPBC Act is therefore not reduced.

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

The Proposed Action is proposed in the context of the ACT's planning legislation, including the *Planning and Development Act 2007* (PD Act) and the Territory Plan 2008 (Territory Plan). It should be noted that both of these statutory planning documents have been superseded by 2023 versions, but the Proposed Action's planning process commenced under the PD Act while it was still in force and continues to apply. The PD Act details the requirement for planning approval, including assessment pathways and information requirements.

The Proposed Action is located on land classified as Territory Land (as opposed to National Land) and runs through several blocks which have varying custodianship (see **Table 1**, **Attachment B**). The Territory Plan applies to Territory Land within the ACT, thus the jurisdiction for planning and development proposals with the Proposed Action Area lies with the ACT Environment, Planning and Sustainable Development Directorate (EPSDD). The purpose of the Territory Plan is to manage land use change and development in a manner that is consistent with strategic directions set by the ACT Government, Legislative Assembly and the community, in a manner that is not inconsistent with the National Capital Plan (NCP).

The PD Act contained a track-based system for assessing developments. A development will fall into one of three assessment tracks depending upon several factors such as its location, size, and potential impact on the surrounding area. The Proposed Action fell under the impact track assessment pathway as it involves the construction of an above-ground transmission line with a voltage over 132 kV, exceeding 500 m in

length and located outside an existing easement. It also has the potential to impact threatened ecological communities and threatened species habitat (see **Section 4.1.4** for more information). Impact track development applications require an Environmental Impact Statement (EIS) to be prepared (unless exempted by the Minister), which provides the most stringent level of environmental assessment compared to other tracks. An EIS details the anticipated environmental impacts of a development and proposes avoidance, mitigation, management and offset measures.

As per consultation with the Department of Climate Change, Energy, the Environment and Water (DCCEEW), the Proposed Action is not intended to be assessed under the ACT Bilateral Assessment Agreement as the larger action is cross-jurisdictional. As such, the EPBC Act and PD Act processes are being undertaken in parallel, with an EIS Scoping Document Application submitted to the EPSDD on 12 May 2023. The Scoping Document was received on 13 July 2023, which details the matters to be addressed in the EIS.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Consultation on the Proposed Action has involved direct ongoing communication with the various stakeholders, including host and neighbouring landholders, Traditional Owners, local residents, local ACT and NSW communities, nearby utility owners (including Transgrid who would ultimately own the Proposed Action's assets), special interest groups such as the Strathnairn Arts Centre, various government agencies, and relevant ACT Legislative Assembly members.

The Proponent has been responsible for all stakeholder management and engagement to date. This has included:

- Study of several alternatives for the new alignments with input from affected landholders and other stakeholders including the Representative Aboriginal Organisations (RAOs) of the ACT
- Collaborative design with Transgrid based on ecological and heritage constraints mapping
- Regular engagement and updates with all landholders impacted by the proposed realignment works including the ACT Suburban Land Agency (SLA), Parks and Conservation Service (PCS), and private landholders
- · Valuations of the proposed easements and offers of compensation to all affected landholders
- Updates on progress with the Proposed Action's development to the Ginninderry Aboriginal Advisory Group, Ginninderry People and Place Group, Bush on the Boundary, ACT Government and the National Housing Finance and Investment Corporation.

Additionally, the Proponent will be holding two community drop-in sessions for the Proposed Action in November 2024. The first will be held at Ginninderry to target Ginninderry residents, other ACT community members and other interested stakeholders; and the second will be at Uriarra Crossing (Uriarra Recreation Reserve), targeting rural landholders in the ACT and NSW who live near the Proposal Area (e.g. off Fairlight Road).

Attachment D summarises the Proponent's community and stakeholder engagement approach and the outcomes of its engagement activities.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

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Confirm that you have read and understand this Privacy Notice *

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details		
ABN/ACN	18059519041	
Organisation name	UMWELT (AUSTRALIA) PTY. LTD.	
Organisation address	Unit 3 2/6 Shea St, Phillip ACT 2606	
Referring party details		
Name	Alexander Garrett	
Job title	Senior Environmental Scientist	
Phone	+61449253999	
Email	alexander.garrett@umwelt.com.au	

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details		
ABN/ACN	165870539	
Organisation name	RIVERVIEW PROJECTS (ACT) PTY LIMITED	
Organisation address	PO Box 3908, Manuka ACT 2603	
Person proposing to tak	e the action details	
Name	David Maxwell	
Job title	Managing Director	
Phone	0404 829 048	
Email	jessica@ginninderry.com	
Address	The Link, 1 McClymont Way, Strathnairn ACT 2615	

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

Yes

Joint Venture Name	Business Address	ABN/ACN	Responsible Person	Email
RIVERVIEW PROJECTS (ACT) PTY LIMITED	The Link, 1 McClymont Way, Strathnairn ACT 2615	165870539	David Maxwell	jessica@ginninderry.com
Suburban Land Agency	480 Northbourne Ave, Dickson ACT 2602	27105505367		

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

The GJV is a joint venture between the Territory and Riverview Projects (ACT) Pty Ltd. The Territory is represented by the SLA, which is a statutory authority within the EPSDD that is responsible for urban development in the ACT on behalf of the ACT Government. SLA developments aim to balance social, economic and environmental benefits for all Canberrans through the following:

- Affordable living
- A safe and healthy population
- Social inclusion and diversity
- Housing choices
- Environmental sustainability.

Riverview Group is a subsidiary of Corkhill Bros Pty Ltd. It is a property development company that aims to create "communities of modern commerce and living that are at the forefront of international design and sustainability". Riverview Projects (ACT) Pty Ltd (Riverview) acts as the development/project manager for the joint venture.

As the managing agent of the GJV, Riverview's past and future projects have been and will continue to be carried out in accordance with all relevant environmental protection policies and guidelines. The planning, design and construction of their projects have met industry best practice and the Proponent will continue to operate in this manner. Riverview has a strong history of responsible environmental management and has not been subject to any proceedings under Commonwealth, State or Territory law.

The Ginninderry residential development project has the West Belconnen Strategic Assessment Area approval of April 2017 in place for urban development in West Belconnen. For compliance purposes, the Ginninderry project prepares annual reports all of which have been submitted and endorsed and are publicly available as required by the approval. The project also recently completed the first five-year audit report in 2022 which has been endorsed by DCCEEW.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

The GJV is developing the Ginninderry residential development project, with a vision of inspiring sustainable living, development practice and awareness. Achieving a high quality of life for the people living in Ginninderry is at the heart of the project's planning and design.

The GJV has a range of principles that direct decision-making by all project management, subconsultants and referral agencies in the delivery and development of the project. The principles reflect national priorities and Federal, State and Territory Government policies on housing affordability, climate change and environmental protection. These principles are shown in the GJV's vision statement at **Attachment E**.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details		
ABN/ACN	165870539	
Organisation name	RIVERVIEW PROJECTS (ACT) PTY LIMITED	
Organisation address	PO Box 3908, Manuka ACT 2603	
Proposed designated pro	oponent details	
Name	David Maxwell	
Job title	Managing Director	
Phone	0404 829 048	
Email	jessica@ginninderry.com	
Address	The Link, 1 McClymont Way, Strathnairn ACT 2615	

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	18059519041
Organisation name	UMWELT (AUSTRALIA) PTY. LTD.
Organisation address	Unit 3 2/6 Shea St, Phillip ACT 2606
Representative's name	Alexander Garrett
Representative's job title	Senior Environmental Scientist
Phone	+61449253999
Email	alexander.garrett@umwelt.com.au
Address	Unit 3 2/6 Shea St, Phillip ACT 2606

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	165870539
Organisation name	RIVERVIEW PROJECTS (ACT) PTY LIMITED
Organisation address	PO Box 3908, Manuka ACT 2603
Representative's name	David Maxwell
Representative's job title	Managing Director
Phone	0404 829 048
Email	jessica@ginninderry.com
Address	The Link, 1 McClymont Way, Strathnairn ACT 2615

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Person proposing to take the action

2. Location

2.1 Project footprint



Project area (69 Ha) Disturbance footprint (10.9 Ha) Maptaskr © 2025 -35.252795, 148.925005

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2.2 Footprint details

2.2.1 What is the address of the proposed action? *

315 Stockdill Drive, Holt ACT 2611

2.2.2 Where is the primary jurisdiction of the proposed action? *

Australian Capital Territory

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The Proposed Action passes through multiple blocks with varying custodianship, including private leases and open space. Refer to **Table 1** (**Attachment B**) for the land use zoning of each block. See also **Figure 5** (**Attachment A**).

The Proponent is acting as the agent for and on behalf of Transgrid who will ultimately be the owner and operator of the transmission lines, responsible for compensating landholders for the required easements. The underlying property holders will retain responsibility for managing the land underneath the transmission lines as is common and current practice for transmission line projects.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The Proposed Action sits within the low hills and plains landscape of the ACT, which is generally dominated by woodland and secondary grassland ecological communities. Low and moderate-high quality box gum woodlands and derived native grasslands are present throughout the Proposed Action Area, with a very small patch of natural temperate grassland also located in the area. The higher quality native vegetation is located in the eastern and western ends of the new alignments within the ACT, with exotic grasslands located elsewhere throughout the Proposed Action Area.

The Proposed Action Area and surrounding landscape have a history of agricultural land use, primarily livestock grazing. As a result, the landscape has been subject to extensive land clearing and some environmental degradation. No existing contamination has been found in the Proposed Action Area, although there is potential for fill and pesticides to be present consistent with a history of rural land use, and for PFAS to be present at one location due to legacy fire-fighting practices in the area.

The Proposed Action Area spans two riparian corridors (the Murrumbidgee and Molonglo Rivers) as well as several smaller water features. The eastern sections of the new alignments are within the lower Molonglo catchment, while the western sections of the new alignments and the lines to be removed are located outside of the Molonglo catchment, within the upper Murrumbidgee catchment. These river corridors provide important habitat for many species in the ACT region, including threatened species.

Several public reserves are located within or near the Proposed Action Area, including the Woodstock Nature Reserve, GCC, Molonglo River Corridor and Kama Nature Reserve (see **Figure 1**, **Attachment A**). These reserves are important natural systems in the ACT as they contain significant ecological values and contribute to landscape connectivity throughout the region.

The Disturbance Footprint is 10.84 ha and contains a total of 4.91 ha of native vegetation, comprising box gum woodland, derived native grassland, dry forest and natural temperate grassland. The remaining 5.93 ha of the Proposed Action Area comprises planted native and exotic vegetation and infrastructure such as roads.

A total of six mature hollow-bearing *Eucalyptus* trees were identified within the Disturbance Footprint. An additional 10 mature trees are located immediately adjacent to the Disturbance Footprint.

3.1.2 Describe any existing or proposed uses for the project area.

The Proposed Action Area is a mixture of privately leased rural land and public land. The privately leased land is mostly undeveloped and managed with sheep grazing, except for the eastern part of the Proposal Area which is being developed for residential purposes and utility infrastructure (see **Figure 5**, **Attachment A**). The public land is managed as nature reserve or other conservation areas. All existing land uses would continue unchanged following construction, with minor disruptions to occur during construction (e.g. exclusion of stock from construction areas). The Proposed Action is expected to have minimal impacts on existing land uses and is not considered inconsistent with the current uses of the Proposed Action Area, particularly as transmission lines already occur in the region.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

The most important natural values in the Proposed Action Area are associated with the Murrumbidgee and Molonglo River corridors. The Proposed Action would span both river corridors but is not expected to impact on any riparian habitat. The two rivers are a key feature of the ACT catchment and contain significant vegetation and aquatic habitat values, as well as providing amenity and recreational value.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The Proposed Action Area contains moderately steep slopes in the areas surrounding the river corridors, with undulating topography across the remainder of the area. There is a gradual increase in elevation from east to west. The highest elevation is approximately 610 m, while the lowest is approximately 430 m.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Information on the flora and fauna within the Proposed Action Area is available in the Biodiversity Assessment Report (BAR) at **Attachment F** (Sections 4.4.4 – 4.4.6) and summarised below.

<u>Flora</u>

Field surveys were conducted in December 2021; November and December 2022; and February, August and October 2023 to identify all native vegetation in the Disturbance Footprint, and to map vegetation communities and condition zones in accordance with the ACT Plant Community Type classification system.

The Proposed Action Area predominately comprises cleared agricultural land but has some patches of remnant woodland and native grassland (see **Figure 6**, **Attachment A**). Although the area has been degraded by grazing and has been cleared for agricultural uses, parts of the Proposed Action Area still support box gum woodland, derived native grasslands and natural temperate grasslands in varying conditions.

Groundcover in the Proposed Action Area is dominated by exotic annual species, but some areas still contain native species including common wallaby-grass (*Rytidosperma caespitosa*), red grass (*Bothriochloa macra*) and kneed spear grass (*Austrostipa bigeniculata*). On the lower and mid slopes of the Proposed Action Area, particularly west of the Murrumbidgee River and east of the Molonglo River, are scattered eucalypt trees including yellow box (*Eucalyptus melliodora*), Blakely's red gum (*E. blakelyi*) and apple gum (*E. bridgesiana*). The steeper and more elevated areas contain degraded remnants that include red stringybark (*E. macrorhyncha*), scribbly gum (*E. rossii*) and brittle gum (*E. mannifera*). Exotic vegetation in the Proposed Action Area includes blackberry (*Rubus plicatus*), clover (*Trifolium* sp.) and various exotic broad leaf species.

A total of six mature hollow-bearing *Eucalyptus* trees were identified within the Disturbance Footprint. An additional 10 mature trees are located immediately adjacent to the Disturbance Footprint.

Targeted surveys were undertaken within the Disturbance Footprint in October 2023 for three threatened flora species:

- Hoary sunray (Leucochrysum albicans subsp. tricolor) endangered
- Small purple-pea (Swainsona recta) endangered
- Austral toadflax (*Thesium australe*) vulnerable.

Surveys for Austral toadflax were also undertaken in the previous flowering season, in February 2023.

Informal surveys were undertaken for pale pomaderris (*Pomaderris pallida*) (vulnerable) during the October 2023 threatened flora surveys, as the species is large and highly distinctive.

Further information about the vegetation and threatened flora surveys can be found in **Section 3.3** of the BAR at **Attachment F**.

None of the species were recorded within the Disturbance Footprint.

<u>Fauna</u>

Surveys for threatened fauna habitat were undertaken during the vegetation surveys in December 2021; November and December 2022; and February, August and October 2023 (see **Section 3.3** of the BAR at **Attachment F** for further information). Targeted surveys were also undertaken for some threatened species, as described below and detailed in **Section 3.3.5** of the BAR (**Attachment F**).

The Proposed Action Area contains some fauna habitat for both common and threatened species. This includes extensive outcroppings of loose surface rocks, hollow-bearing trees, and restricted patches of regenerating woodland and native grasslands (both derived and otherwise).

Areas of rocky habitat within the Proposed Action Area are suitable for pink-tailed worm-lizard (*Aprasia parapulchella*) (PTWL) (see **Figure 7**, **Attachment A**). PTWL is known to occur extensively throughout the Molonglo and Murrumbidgee River valleys, and a small amount of potential habitat occurs within the Disturbance Footprint (1.09 ha). No surveys for the species were undertaken and their presence was assumed. Given the small amount of available habitat within the Disturbance Footprint, it is unlikely that it supports a population that would be considered important.

Potential foraging habitat for superb parrot (*Polytelis swainsonii*) (vulnerable), and potential breeding and foraging habitat for gang-gang cockatoo (*Callocephalon fimbriatum*) (endangered), occurs within the Proposed Action Area, and within the Disturbance Footprint. Targeted surveys for both species were undertaken in November and December 2022 in accordance with *Survey guidelines for Australia's threatened birds*. Neither species was observed during the surveys.

Potential habitat for golden sun moth (*Synemon plana*) (GSM) occurs throughout the Proposed Action Area in patches of derived native grassland and natural temperate grasslands. Targeted GSM surveys were conducted in areas of potential habitat within the Disturbance Footprint in November 2023. Targeted surveys had also been undertaken throughout an older alignment corridor in December 2021. Surveys were conducted in accordance with the Significant impact guidelines for the critically endangered golden sun moth (Synemon plana). No individuals were recorded during any of these surveys.

The Proposed Action Area supports remnant mature native tree species that provide woodland birds (other than the superb parrot and gang-gang cockatoo) with foraging and breeding habitat and movement corridors. A total of 4.91 ha of potential habitat including box gum woodland, grasslands and open forest in the Disturbance Footprint would provide foraging and breeding habitat for woodland birds (see **Figure 6**, **Attachment A**). The Proposed Action Area also contains the exotic sweet briar (*Rosa rubiginosa*) and other native and exotic grass species which are likely to provide foraging and breeding resources for these threatened bird species.

No targeted surveys were undertaken for threatened woodland birds (other than the superb parrot and gang-gang cockatoo), but any incidental sightings during other field surveys were recorded and used to inform the impact assessment. Hooded robin (*Melanodryas cucullate*) (endangered) and painted honeyeater (*Grantiella picta*) (vulnerable) were not recorded within the Proposed Action Area. No diamond firetail (*Stagonopleura guttata*) (vulnerable) individuals were recorded within the Proposed Action Area, however, they have previously been recorded in the immediate vicinity. Two southern whiteface (*Aphelocephala leucopsis*) (vulnerable) individuals were recorded within the Proposed Action Area, but not within the Disturbance Footprint.

The Proposed Action Area also contains potential habitat for non-EPBC Act listed fauna such as the perunga grasshopper, other woodland birds (e.g. scarlet robin (*Petroica boodang*)), and common wombat (*Vombatus ursinus*).

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Information on the vegetation within the Proposed Action Area is available in the Biodiversity Assessment Report (BAR) at Attachment F (Sections 4.4.1 - 4.4.3) and summarised below.

The Proposed Action Area covers a large area and therefore supports a range of vegetation communities. As discussed in **Section 3.1** (see also **Figure 6**, **Attachment A**), patches of native woodlands and native grasslands are located throughout the Proposed Action Area, particularly east of the Molonglo River and west of the Murrumbidgee River. Three plant community types were recorded in the Proposed Action Area:

- ACT01 Tablelands Dry Tussock Grassland: Occurs in a 'rocky natural grassland' form on the upper slopes of the Molonglo River corridor. A substantial patch of this community in high condition was identified immediately east of the Molonglo River. Small fragments of vegetation conforming to a degraded form of ACT01 were also identified on and around rocky outcrops along the western side of the Molonglo River.
- ACT16 *Eucalyptus melliodora E. blakelyi* tableland grassy woodland: Occurs on lower and mid slopes at several locations throughout the Proposed Action Area, particularly west of the Murrumbidgee River and east of the Molonglo River. The majority of the community in the Proposed

Action Area comprises derived native grassland, with small patches of extant woodland typically supporting scattered box gum trees and a degraded understorey.

 ACT25 Eucalyptus macrorhyncha tableland grass / shrub forest: Occurs on steep slopes and elevated areas west of the Murrumbidgee River. The community is present in degraded regenerating remnants and as derived grasslands that lack regeneration and a forest structure. Some areas of derived grassland east of the Molonglo River may also have formerly supported this community prior to clearing where the community would have intergraded with ACT16.

The central portion of the Proposed Action Area is dominated by exotic grasses. Isolated paddock trees occur throughout the Proposed Action Area.

The Disturbance Footprint contains 4.91 ha of native vegetation comprising the communities listed above. The remaining 5.93 ha comprises planted native vegetation, exotic vegetation and infrastructure.

A total of six mature hollow-bearing *Eucalyptus* trees were identified within the Disturbance Footprint. An additional 10 mature trees are located immediately adjacent to the Disturbance Footprint.

In the South Eastern Highlands bioregion, soils on the Palaeozoic slates, sandstones and volcanics consist of mottled red and yellow textured contrast soils, with red earths. On the granites, shallow red earths occur on ridges, yellow texture contrast soils on all slopes and deep coarse sand in alluvium. On Tertiary basalts, shallow red-brown to black stony loam exist, with alluvial loam and black clays in swampy valley floors.

Reference to the Brindabella 1:100 000 geological map indicates that the Proposed Action Area comprises granite-like rocks which formed from the Murrumbidgee batholith intruding during the late Silurian or early Devonian period. The Murrumbidgee batholith has a range in composition from tonalite to leucogranite.

3.3 Heritage

3.3.1 Describe any Commonwealth heritage places overseas or other places recognised as having heritage values that apply to the project area.

The Proposed Action is located on properties that are subject to one or more heritage listings under the ACT Heritage Register. Only one of these heritage listings has been registered and is located sufficiently close to the Proposal to warrant consideration in relation to the Proposed Action – the Huntly pastoral property (heritage listing Item 20031). Additionally, the NSW/ACT border markers northwest of Ginninderry have been nominated to the ACT Heritage Register but are not yet registered.

Huntly is also listed on the Australian Heritage Database (Place ID 19432), as a 'Indicative Place' on the Register of the National Estate, which is a non-statutory archived register. An Indicative Place has not formally been nominated or registered to the National Heritage List, which means that Huntly does not have statutory protection at the national level. No heritage places are registered on the Australian Heritage Database in the vicinity of the Proposed Action Area.

Huntly

The Huntly listing on the ACT Heritage Register extends across Blocks 412, 413, 426, 487-490 and adjacent road reserves in the District of Stromlo, of which Blocks 487 and 488 are in the Proposal Area. The new alignments cross over these blocks.

The Statement of Significance for Huntly states that Huntly has historic associations with the development of the Limestone Plains and associational significance with local figures of the pastoral era. It is a representative element of the rural setting of the National Capital, and is an example of a 20th Century grazing property, which was a characteristic land use of the ACT before the expansion of the National

Capital in the second half of the century. The homestead garden merges the European gardenesque design with the Australian landscape. The aesthetics are consistent with late 20th Century standards appropriate for staging cultural, political and social events.

Although the Proposed Action Area crosses the blocks in the Huntly heritage listing, the Proposed Action itself is not located close to the Huntly heritage features. The closest feature to the Proposed Action is the shearing shed, which is approximately 2.6 km from the new alignments.

NSW/ACT border markers

The NSW/ACT border markers located along the border northwest of Ginninderry, date from 1913-15 and are associated with the establishment of the National Capital and its surrounding territory. They are among the earliest surviving structures erected after the founding of the ACT. The markers contain many good examples of the type of markers used by surveyors of the time, including some rare mile reference trees whose engravings display skilful use of mallet and chisel.

The NSW/ACT border markers at this location have been nominated but not yet registered to the ACT Heritage Register, so are not currently afforded any statutory protection. However, the markers are still considered to have heritage significance and have been treated the same as any listed heritage place in relation to the Proposed Action (i.e. with impacts to be avoided in the first instance).

The NSW/ACT border markers are located in the Proposed Action Area but more than 67 m from the proposed works.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

A Cultural Heritage Assessment (CHA) was undertaken by Past Traces for the Proposed Action and is attached at **Attachment G**. The CHA involved a desktop review of heritage databases, a literature review of Aboriginal archaeological and historical information relevant to the Proposed Action Area and surrounds, and field surveys to identify any Aboriginal items or sites that could be impacted by the Proposed Action.

Field surveys were initially undertaken in January 2022, covering a 10 m-wide corridor along the sections of Lines 1 and 7 proposed for removal, and a 50 m radius around existing tower locations. Surveys were also completed along the new alignment routes, covering a width of 50 m along the length of the proposed alignments and the new tower locations. The findings of these surveys informed the revision of the new alignments to minimise potential impacts.

Additional surveys were undertaken in March and September 2023 to cover changes made to the new alignment routes and the full construction footprint as assessed in this referral. All field surveys were undertaken in the presence of representatives from the ACT Representative Aboriginal Organisations (RAOs), including:

- Mirrabee (formerly known as the Little Gudgenby River Tribal Council)
- King Brown Tribal Group
- Buru Ngunawal Aboriginal Corporation
- Ngarigu Currawong Clan.

In addition to the discussions held on site, three different versions of the draft CHA were supplied to the RAOs for comment, with follow-up phone calls made to each RAO to confirm if they had any concerns with the report's findings or recommended management strategies. No concerns were raised, and some RAOs stated that they agreed with the report's recommendations.

The ACT and NSW Aboriginal heritage databases show that there are numerous Aboriginal heritage sites located through the landscape surrounding the Proposed Action Area as shown in **Figure 8** (**Attachment A**). Although direct impacts are not anticipated, protective barrier fencing will be installed to prevent any accidental impacts to any sites located near the Disturbance Footprint. With this mitigation measure in

place, potential impacts of the Proposed Action on Aboriginal heritage sites would be limited to any impacts that could occur on unexpected finds during construction. An Unexpected Finds Protocol will be established to manage this risk.

These Aboriginal heritage sites are protected under ACT legislation (*Heritage Act 2004*) but are not listed as national or world heritage places and are not MNES.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

The Proposed Action crosses two riparian corridors, the Murrumbidgee and Molonglo Rivers, as well as a number of small water features such as creeks and farm dams. The eastern section of the new alignments is within the lower Molonglo catchment, while the western section of the new alignments and the lines to be removed are within the upper Murrumbidgee catchment.

There are no Ramsar wetlands or nationally important wetlands within the Proposed Action Area or in proximal distance downstream (where a hydrological connection could lead to impacts from the Proposed Action).

There are no known nearby monitoring or abstraction bores within the Proposed Action Area. The closest registered bore is approximately 1 km from the new alignments on the outskirts of the suburb of Holt, ACT. The status of groundwater in the Proposed Action Area is therefore unknown, although it is expected to be recharged from rainfall and potentially from seepage from surface water flows, and may discharge to the Molonglo and Murrumbidgee Rivers.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes

EPBC Act section	Controlling provision	Impacted	Reviewed
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	No	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	Yes	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

There are no listed World Heritage properties within or near the Proposed Action Area. No direct or indirect impacts are therefore expected as a result of the Proposed Action.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

There are no listed National Heritage places within or near the Proposed Action Area. No direct or indirect impacts are therefore expected as a result of the Proposed Action.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Ramsar wetland
No	No	Banrock Station Wetland Complex
No	No	Gippsland Lakes

Direct impact	Indirect impact	Ramsar wetland
No	No	Hattah-Kulkyne Lakes
No	No	Riverland
No	No	The Coorong, and Lakes Alexandrina and Albert Wetland

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action is located within the catchment of a number of Ramsar wetlands (including Hattah-Kulkyne Lakes; Banrock Station Wetland Complex; Riverland; and the Coorong, and Lakes Alexandrina and Albert Wetland). However, these wetlands are all more than 500 km downstream of the Proposed Action Area. As the Proposed Action has been designed to avoid impacts on waterways, there would be no downstream impacts, either direct or indirect, on any of these wetlands.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	Ammobium craspedioides	Yass Daisy
No	No	Amphibromus fluitans	River Swamp Wallaby-grass, Floating Swamp Wallaby-grass
No	No	Antechinus minimus maritimus	Swamp Antechinus (mainland)

Direct impact	Indirect impact	Species	Common name
No	No	Anthochaera phrygia	Regent Honeyeater
Yes	No	Aphelocephala leucopsis	Southern Whiteface
Yes	No	Aprasia parapulchella	Pink-tailed Worm-lizard, Pink-tailed Legless Lizard
No	No	Ardenna grisea	Sooty Shearwater
No	No	Balaenoptera borealis	Sei Whale
No	No	Balaenoptera musculus	Blue Whale
No	No	Balaenoptera physalus	Fin Whale
No	No	Bidyanus bidyanus	Silver Perch, Bidyan
No	No	Botaurus poiciloptilus	Australasian Bittern
No	No	Caladenia concolor	Crimson Spider-orchid, Maroon Spider- orchid
No	No	Caladenia tessellata	Thick-lipped Spider-orchid, Daddy Long- legs
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris canutus	Red Knot, Knot
No	No	Calidris ferruginea	Curlew Sandpiper
Yes	No	Callocephalon fimbriatum	Gang-gang Cockatoo
No	No	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
No	No	Carcharodon carcharias	White Shark, Great White Shark
No	No	Caretta caretta	Loggerhead Turtle
No	No	Centrophorus harrissoni	Harrisson's Dogfish, Endeavour Dogfish, Dumb Gulper Shark, Harrison's Deepsea Dogfish
No	No	Centrophorus uyato	Little Gulper Shark
No	No	Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat
No	No	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	No	Chelonia mydas	Green Turtle
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)

Direct impact	Indirect impact	Species	Common name	
No	No	Commersonia prostrata	Dwarf Kerrawang	
No	No	Crinia sloanei	Sloane's Froglet	
No	No	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	
No	No	Delma impar	Striped Legless Lizard, Striped Snake- lizard	
No	No	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth	
No	No	Diomedea antipodensis	Antipodean Albatross	
No	No	Diomedea antipodensis gibsoni	Gibson's Albatross	
No	No	Diomedea epomophora	Southern Royal Albatross	
No	No	Diomedea exulans	Wandering Albatross	
No	No	Diomedea sanfordi	Northern Royal Albatross	
No	No	Dodonaea procumbens	Trailing Hop-bush	
No	No	Eubalaena australis	Southern Right Whale	
No	No	Eucalyptus aggregata	Black Gum	
No	No	Falco hypoleucos	Grey Falcon	
No	No	Fregetta grallaria grallaria	White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian)	
No	No	Galaxiella pusilla	Eastern Dwarf Galaxias, Dwarf Galaxias	
No	No	Galeorhinus galeus	School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark	
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe	
Yes	No	Grantiella picta	Painted Honeyeater	
No	No	Halobaena caerulea	Blue Petrel	
No	No	Heleioporus australiacus	Giant Burrowing Frog	
No	No	Hirundapus caudacutus	White-throated Needletail	
No	No	Hoplostethus atlanticus	Orange Roughy, Deep-sea Perch, Red Roughy	
No	No	Lathamus discolor	Swift Parrot	

Direct impact	Indirect impact	Species	Common name	
No	No	Lepidium aschersonii	Spiny Peppercress	
No	No	Lepidium ginninderrense	Ginninderra Peppercress	
No	No	Lepidium hyssopifolium	Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed	
No	No	Leucochrysum albicans subsp. tricolor	Hoary Sunray, Grassland Paper-daisy	
No	No	Limosa lapponica baueri	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit	
No	No	Lissolepis coventryi	Swamp Skink, Eastern Mourning Skink	
No	No	Litoria aurea	Green and Golden Bell Frog	
No	No	Litoria booroolongensis	Booroolong Frog	
No	No	Litoria castanea	Yellow-spotted Tree Frog, Yellow-spotted Bell Frog	
No	No	Litoria raniformis	Southern Bell Frog,, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog	
No	No	Maccullochella macquariensis	Trout Cod	
No	No	Maccullochella peelii	Murray Cod	
No	No	Macquaria australasica	Macquarie Perch	
No	No	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel	
No	No	Macronectes halli	Northern Giant Petrel	
Yes	No	Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)	
No	No	Muehlenbeckia tuggeranong	Tuggeranong Lignum	
No	No	Neophema chrysogaster	Orange-bellied Parrot	
No	No	Neophema chrysostoma	Blue-winged Parrot	
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew	
No	No	Pachyptila turtur subantarctica	Fairy Prion (southern)	
No	No	Petauroides volans	Greater Glider (southern and central)	

Direct impact	Indirect impact	Species	Common name	
No	No	Petaurus australis australis	Yellow-bellied Glider (south-eastern)	
No	No	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	
No	No	Phoebetria fusca	Sooty Albatross	
Yes	No	Polytelis swainsonii	Superb Parrot	
No	No	Pomaderris cotoneaster	Cotoneaster Pomaderris	
No	No	Pomaderris pallida	Pale Pomaderris	
No	No	Prasophyllum frenchii	Maroon Leek-orchid, Slaty Leek-orchid, Stout Leek-orchid, French's Leek-orchid, Swamp Leek-orchid	
No	No	Prasophyllum petilum	Tarengo Leek Orchid	
No	No	Prototroctes maraena	Australian Grayling	
No	No	Pseudomys novaehollandiae	New Holland Mouse, Pookila	
No	No	Pterodroma leucoptera leucoptera	Gould's Petrel, Australian Gould's Petrel	
No	No	Pteropus poliocephalus	Grey-headed Flying-fox	
No	No	Pterostylis chlorogramma	Green-striped Greenhood	
No	No	Pycnoptilus floccosus	Pilotbird	
No	No	Rexea solandri (eastern Australian population)	Eastern Gemfish	
No	No	Rhincodon typus	Whale Shark	
No	No	Rostratula australis	Australian Painted Snipe	
No	No	Rutidosis leptorhynchoides	Button Wrinklewort	
No	No	Senecio macrocarpus	Large-fruit Fireweed, Large-fruit Groundsel	
No	No	Senecio psilocarpus	Swamp Fireweed, Smooth-fruited Groundsel	
No	No	Seriolella brama	Blue Warehou	
Yes	No	Stagonopleura guttata	Diamond Firetail	
No	No	Sternula nereis nereis	Australian Fairy Tern	

Direct impact	Indirect impact	Species	Common name	
No	No	Swainsona recta	Small Purple-pea, Mountain Swainson-pea, Small Purple Pea	
No	No	Synemon plana	Golden Sun Moth	
No	No	Thalassarche bulleri	Buller's Albatross, Pacific Albatross	
No	No	Thalassarche bulleri platei	Northern Buller's Albatross, Pacific Albatross	
No	No	Thalassarche carteri	Indian Yellow-nosed Albatross	
No	No	Thalassarche cauta	Shy Albatross	
No	Νο	Thalassarche chrysostoma	Grey-headed Albatross	
No	No	Thalassarche eremita	Chatham Albatross	
No	No	Thalassarche impavida	Campbell Albatross, Campbell Black- browed Albatross	
No	No	Thalassarche melanophris	Black-browed Albatross	
No	No	Thalassarche salvini	Salvin's Albatross	
No	No	Thalassarche steadi	White-capped Albatross	
No	No	Thelymitra epipactoides	Metallic Sun-orchid	
No	No	Thesium australe	Austral Toadflax, Toadflax	
No	No	Thinornis cucullatus cucullatus	Eastern Hooded Plover, Eastern Hooded Plover	
No	No	Tringa nebularia	Common Greenshank, Greenshank	
No	No	Uperoleia martini	Martin's Toadlet	
No	No	Xerochrysum palustre	Swamp Everlasting, Swamp Paper Daisy	

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Natural Damp Grassland of the Victorian Coastal Plains
Yes	No	Natural Temperate Grassland of the South Eastern Highlands
No	No	Subtropical and Temperate Coastal Saltmarsh

Direct impact	Indirect impact	Ecological community
Yes	No	White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Potential impacts on EPBC Act listed threatened species and communities are discussed below. These impacts are not considered to be significant. Significant impact assessments for species which have the potential to occur in the Proposed Action Area but which were confirmed not to be present during field surveys (e.g. golden sun moth and threatened flora species) can be found in **Attachment H**. The Proposed Action may have significant impacts on superb parrot and gang-gang cockatoo. These impacts are discussed in **Section 4.1.4.5**.

White box-yellow box-Blakely's red gum grassy woodland and derived native grassland

Vegetation zones ACT16.1, ACT16.4 and ACT16.5, covering a total of 2.37 ha across 11 areas, are present in the Disturbance Footprint and meet the classification criteria for the EPBC Act listed BGW, in accordance with the National Recovery Plan for White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland (BGW Recovery Plan). The majority of the TEC (2.29 ha) is in the derived native grassland form, of which 2.27 ha is low quality. All zones were assessed as Class B in accordance with the BGW Recovery Plan due to the sparse cover (or absence) of canopy species.

Noting that the Disturbance Footprint sits within a landscape that supports large areas of box gum woodland (as previously assessed by Umwelt and as indicated on ACTmapi woodland mapping), the patch sizes are considered to be more than 2 ha. The patches of BGW form part of, and are on the edge of, a much larger patch of woodland and derived native grassland in the broader landscape, which includes areas protected in the Woodstock and Molonglo River Nature Reserves (see **Figure 1**, **Attachment A**). ACT16.6, ACT16.7, ACT01 and ACT25 do not meet the classification criteria of the EPBC Act listed TEC (refer to **Table 4.6** in the BAR at **Attachment F** for the detailed assessment of each plant community type (PCT) against the BGW condition classes and thresholds).

Impacts on BGW as a result of the Proposed Action would include direct clearing for the construction of towers, laydown areas and along the access tracks (see **Figure 9**, **Attachment A**). There is also potential for indirect impacts on adjacent areas of BGW from the spread of weeds during construction, sedimentation, and dust deposition, however these would be mitigated through a range of measures at detailed at the end of this section.

A significant impact assessment was undertaken for BGW in accordance with the Significant Impact Guidelines. As shown in **Attachment H** (which contains the most up-to-date significant impact assessments for the Proposed Action), the assessment concluded that the Proposal does not meet the significant impact criteria for BGW, and would not have a significant impact on the TEC, as the extent of reduction of BGW is minimal in the context of the broader extent of the TEC, especially noting that it is distributed across 11 areas within the Disturbance Footprint and mostly in a derived state.

Natural temperate grassland of the south eastern highlands

Less than 0.01 ha of NTG is present within the Disturbance Footprint and would be directly impacted by the Proposed Action. This patch meets the high to very high condition threshold (patches with good native coverage and high native plant diversity) as defined in the Approved Conservation Advice (Including Listing Advice) for the Natural Temperate Grassland of the South Eastern Highlands (NTG Conservation Advice).

The NTG Conservation Advice considers areas that are critical to the survival of the TEC to be all patches that meet the key diagnostic characteristics and condition thresholds for the ecological community plus buffer zones. A buffer zone is defined as a "…contiguous area immediately adjacent to a patch of the ecological community that is important for protecting its integrity. The purpose of the buffer zone is to help protect and manage the national ecological community and is not formally protected as a matter of national environmental significance... The recommended minimum buffer zone for the ecological community is 30 metres from the edge of a patch. A larger buffer zone may be applied, where practical, to protect patches that are of particularly high conservation value, or if patches are down slope of drainage lines or a source of nutrient enrichment."

Recognising the high quality of the patch of NTG within the Disturbance Footprint and the position of the patch adjacent to a larger patch of ACT01.3 and ACT01.4 which does not meet the NTG diagnostic criteria on its own (see **Table 4.7** of the BAR at **Attachment F**), it has been determined that the width of the buffer zone should equal the distance from the natural temperate grassland (ACT01.1) to the far edge of the adjacent grassland area (ACT01.3 / ACT01.4), which is a distance of 40 m (see **Figure 9**, **Attachment A**). The buffer zone covers a total area of 0.50 ha, of which 0.29 ha extends beyond the Disturbance Footprint (comprising 0.13 ha of ACT01.1, 0.07 ha of ACT01.3, and 0.09 ha of ACT01.4).

In accordance with the NTG Conservation Advice, the buffer zone is considered to form part of the NTG patch but is not part of the TEC and is not formally protected as an MNES under the EPBC Act. The Proposed Action would therefore result in a direct impact on 0.01 ha of NTG, and the buffer zone may be subject to indirect impacts (e.g. from spread of weeds, sedimentation and dust deposition during construction). It is recognised that the edges of a patch of NTG are particularly susceptible to disturbance, thus the buffer zone will be managed with particular care during construction. Refer to the end of this section for the mitigation and management measures to be adopted by the Proposed Action.

A significant impact assessment was undertaken for NTG in accordance with the Significant Impact Guidelines. As shown in in **Attachment H**, the assessment concluded that the Proposed Action does not meet the significant impact criteria for NTG, and would not have a significant impact on the TEC, given the relatively small size of the area of NTG to be cleared, its location at the edge of a patch, and the mitigation and management measures to be implemented on adjacent grassland.

Pink-tailed worm-lizard

1.09 ha of PTWL habitat occurs within the Disturbance Footprint and would be directly impacted by the Proposed Action. Only 0.15 ha of this habitat is high quality. The presence of PTWL in the Proposed Action Area has been assumed as the species is known to occur in the Molonglo and Murrumbidgee River Corridors; however, given the small amount of available habitat in the Disturbance Footprint, it is unlikely that it supports an important population.

A significant impact assessment was undertaken for PTWL in accordance with the Significant Impact Guidelines. As shown in in **Attachment H**, the assessment concluded that the Proposal does not meet the significant impact criteria for PTWL, and would not have a significant impact on the threatened species given the small amount of potential habitat within the Direct Impact Area, and that there is no known important population utilising the habitat.

Hooded robin, painted honeyeater, diamond firetail, southern whiteface

4.91 ha of grassy woodland habitat occurs within the Disturbance Footprint and would be directly impacted by the Proposed Action, which may provide foraging and breeding opportunities for woodland bird species such as the hooded robin, painted honeyeater, diamond firetail and southern whiteface. The painted honeyeater, diamond firetail and southern whiteface have previously been recorded in the vicinity of the Proposed Action Area (see **Figure 11**, **Attachment A**), but were not recorded during surveys for the Proposed Action. The hooded robin has not previously been recorded in the area and was not recorded during surveys for the Proposed Action.

Given the large distribution of the species and the minimal extent of habitat removal, a significant impact assessment against the EPBC Act Significant Impact Guidelines has not been provided. The Proposed Action is considered unlikely to have a significant impact on the species.

Indirect impacts

The Proposed Action has the potential to have indirect impacts on the above matters through the spread of invasive species, noise, vibration and lighting, erosion and sedimentation, dust emissions and waste generation during construction; and increased predation efficiency and collision mortality once operational (as relevant). These potential impacts are discussed in more detail in **Section 5.3.4** of the BAR (**Attachment F**) and would be mitigated through the measures discussed at the end of this section of the referral.

Cumulative Impacts

The Proposed Action has the potential to contribute to cumulative impacts on the above listed species based on its proximity to other developments in the area, including the NSW portion of the larger action associated with this referral, the Ginninderry residential development, and the proposed Territory Battery.

The Proposed Action is unlikely to significantly contribute to cumulative impacts for these species as the impacts are mostly minimal or have been avoided, there is extensive habitat in the surrounding region including in nearby protected areas such as nature reserves and the Ginninderry Conservation Corridor, and consistent with the findings of the independent ecological assessments of those other developments. Refer to **Attachment C** for a detailed cumulative impact assessment for the impacted species and communities.

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact?

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

The Proposed Action has the potential for significant impacts on superb parrot and gang-gang cockatoo, as described below. Potential impacts on other threatened species or ecological communities are not considered to be significant, as described in **Section 4.1.4.2**.

Superb parrot

Surveys to identify potential superb parrot habitat were undertaken across the Disturbance Footprint in November 2022, and in an additional 'superb parrot tree assessment area' (**Figure 10**, **Attachment A**) in October 2023. No potential nesting trees were recorded in the Disturbance Footprint or in adjacent areas where they would require modification (lopping) to comply with canopy height restrictions for vegetation adjacent to or underneath powerlines.

Eucalyptus and *Acacia* species recorded in the Proposed Action Area provide potential superb parrot foraging habitat. As the species is also known to feed on native grass seed, it is likely that the superb parrot may also use the open grassland areas within the Proposed Action Area for foraging. As such, all native vegetation within the Disturbance Footprint is considered potential foraging habitat for the superb parrot (4.91 ha).

17 trees within the superb parrot tree assessment area were confirmed to be within the height range (10-15 m) identified by the ACT Conservator of Flora and Fauna's team as critical for superb parrot movement. Of these, four are within the Disturbance Footprint and seven are less than 10 m from the Disturbance Footprint.

Targeted surveys were undertaken for superb parrot during the 2022 breeding season in the new alignment corridors. The species was not recorded during these surveys.

Superb parrot is known to breed in the lower Molonglo Valley approximately 5 km east of the Disturbance Footprint. Although no individuals were recorded in the Proposed Action Area, it is likely that the species utilises the Disturbance Footprint for foraging, including supporting breeding pairs from known nesting trees (the species is known to travel up to 10 km from breeding sites to foraging areas). *Eucalyptus* and *Acacia* species recorded in the Disturbance Footprint provide superb parrot foraging habitat. As the species is also known to feed on native and exotic grass seed, it is likely that the superb parrot would also use the open grassland areas within these areas. As such all native vegetation within the Impact Area is considered potential foraging habitat for the superb parrot (4.91 ha made up of multiple areas distributed along the new alignments).

In addition, the removal of 4.91 ha of superb parrot foraging habitat, made up of multiple small areas, is a small loss in a landscape that contains extensive areas of potential superb parrot foraging habitat (native woodlands and grasslands). Within the Proposed Action Area alone, ACTmapi (2024) indicates that there is approximately 49.1 ha of vegetation that would provide potential foraging habitat for superb parrot which would not be impacted by the Proposed Action (see also **Figure 11**, **Attachment A**).

Habitat critical to the survival of the species is defined in the National Recovery Plan for the Superb Parrot *Polytelis swainsonii* (Superb Parrot Recovery Plan) and includes both breeding and foraging habitat.

A significant impact assessment was undertaken for superb parrot in accordance with the Significant Impact Guidelines. As shown in **Attachment H**, the assessment concluded that the removal 4.91 ha of potential foraging habitat could adversely affect habitat critical to the survival of the species. As the Superb Parrot Recovery Plan states that actions that will remove habitat critical to the survival of the species would likely interfere with the recovery of the species, the Proposed Action may have a significant impact on superb parrot.

Gang-gang cockatoo

Surveys to identify potential gang-gang cockatoo nesting or foraging trees were undertaken across the Disturbance Footprint in November 2022 and October 2023.

Six potential gang-gang cockatoo foraging trees were recorded within the Disturbance Footprint, one of which is also a potential nesting tree. An additional 10 potential foraging trees were recorded near the Disturbance Footprint where they may require modification to comply with canopy height restrictions for vegetation underneath powerlines, one of which is also a potential nesting tree. These trees are shown on **Figure 10** (Attachment A).

Targeted surveys were undertaken for gang-gang cockatoo during the 2022 breeding season at locations with potential nesting trees in the new alignment corridors. Five individuals were recorded within the new alignments to the west of the Murrumbidgee River in the river corridor, at a location dominated by red stringybark (*Eucalyptus macrorhyncha*) (see **Figure 11**, **Attachment A**). They formed part of a group and were an incidental sighting, not recorded as part of targeted surveys. The sighting was not within the Disturbance Footprint, but it indicates that the species uses the landscape around the Proposed Action.

Unavoidable impacts on gang-gang cockatoo as a result of the Proposed Action therefore include the removal of six potential foraging trees, one of which is also a potential nesting tree, with possible additional impacts from lopping to an additional 10 potential foraging trees in proximity to the disturbance footprint, one of which is also a potential nesting tree.

The Conservation Advice for *Callocephalon fimbriatum* (Gang-gang Cockatoo) (Gang-gang Cockatoo Conservation Advice) states that habitat critical to the survival of the gang-gang cockatoo includes all foraging habitat during both the breeding and non-breeding seasons (excluding exotic feeding grounds such as ornamental trees, shrubs, and hedges). It notes that habitat critical to the survival of the species includes hollow-bearing trees with known or potential gang-gang cockatoo hollow chambers.

The Proposed Action also has the potential to have indirect impacts on the species through the spread of invasive species, noise, vibration and lighting, erosion and sedimentation, dust emissions and waste generation during construction. These potential impacts are discussed in more detail in **Section 5.3.4.2** of the BAR (**Attachment F**) and would be mitigated through the measures discussed at the end of this section of the referral.

A significant impact assessment was undertaken for gang-gang cockatoo in accordance with the Significant Impact Guidelines. As shown in in **Attachment H**, the assessment concluded that the removal of one potential nesting tree and six potential foraging trees, and the modification of an additional one potential nesting tree and 10 potential foraging trees, would adversely affect habitat critical to the survival of the species. Further, the Gang-gang Cockatoo Conservation Advice states that actions that will remove habitat critical to the survival of the species would likely interfere with the recovery of the species, thus the Proposed Action may have a significant impact on gang-gang cockatoo.

These direct impacts on potential superb parrot and gang-gang cockatoo habitat are considered to be unavoidable. Impacts have been minimised through strategic redesign of the Proposed Action over several years of ecological investigations, including through the refined placement of tower footings and the use of poles rather than towers, which allowed the transmission line heights to be increased above woodland areas, and the disturbance area around the footings to be reduced. Additional changes to the design to further reduce impacts are not considered to be possible from a design and engineering perspective.

Collision with overhead powerlines and associated infrastructure can be a source of mortality for some aerial species. Superb parrot and gang-gang cockatoo are potentially at risk from collision with transmission lines in the Proposed Action Area, although the Superb Parrot Recovery Plan and Gang-gang Cockatoo Conservation Advice do not list the risk of collision as a threat to the species. Neither species is likely to routinely fly at transmission line height. Further, the Proposed Action involves the relocation of existing transmission lines so is not introducing a novel feature to the landscape. Habitat for the species is already somewhat fragmented, with the greatest area of connectivity along the Murrumbidgee and Molonglo River Corridors where the new transmission lines will be at their highest and the risk to the species low. There may be a period of adjustment as affected species adapt to the new alignment location, however, it is not anticipated that superb parrot and gang-gang cockatoo would be at greater risk of collision with transmission lines as a result of the Proposed Action.

The Proposed Action also has the potential to have indirect impacts on the species through the spread of invasive species, noise, vibration and lighting, erosion and sedimentation, dust emissions and waste generation during construction. These potential impacts are discussed in more detail in **Section 5.3.4.1** of the BAR (**Attachment F**) and would be mitigated through the measures discussed at the end of this section of the referral.

4.1.4.7 Do you think your proposed action is a controlled action? *

4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action.

The Proposed Action may have a significant impact on superb parrot and gang-gang cockatoo based on the Superb Parrot Recovery Plan and Gang-gang Cockatoo Conservation Advice. Due to the extensive redesign that the Proposed Action has been subject to over the past several years, which has aimed to avoid and minimise impacts on biodiversity, no further reduction in impacts is considered viable and the residual impacts on potential superb parrot and gang-gang cockatoo habitat are considered to be unavoidable. Given the extent of potential habitat that exists within the surrounding landscape for both species, and that indirect impacts on adjacent areas of habitat will be closely managed during construction, it is considered that the Proposed Action is not a controlled action.

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Avoidance of impacts on TECs and threatened species habitat has been a key focus of the Proposed Action's development over the past several years. The layout of the larger action has been developed through an iterative options analysis process which began with the evaluation of four different alignment options. Constraints mapping was undertaken following preliminary ecological surveys by Umwelt in 2021-22. This informed micrositing of tower locations to avoid and minimise direct ecological impacts. Given the large area covered by the Proposed Action (75.2 ha) and its considerable length (11.3 km of new lines in the ACT), the anticipated impacts of 2.37 ha on BGW and less than 0.01 ha on NTG are considered very small, reflecting the substantial effort that the Proponent has made to avoid ecological impacts. The final location was specifically chosen to avoid impacts on hollow bearing trees where possible. All trees to the west of the Molonglo River have been avoided, while impacts on trees to the east of the Molonglo River have been avoided, while impacts to be removed and a further 10 to be modified (lopped) to maintain standards for trees under powerlines. The final positioning of the new tower footings was also determined through the avoidance of patches of high quality native vegetation, in particular TECs and PTWL habitat. Micrositing of the tower footings has ensured that almost all high quality habitat has been avoided.

The Proposed Action will involve the implementation of industry best practice measures to mitigate and manage direct and indirect impacts on biodiversity. Each of these measures will contribute to the protection of habitat adjacent to the Disturbance Footprint and within the broader Proposed Action Area. These mitigation measures have been developed to ensure they are consistent with all relevant Commonwealth and Territory statutory documents, including conservation advices and recovery plans, in particular:

- The National Recovery Plan for White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland and Approved Conservation Advice for the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland
- The Approved Conservation Advice (Including Listing Advice) for Natural Temperate Grassland of the South Eastern Highlands (EC152)
- National Recovery Plan for the Superb Parrot *Polytelis swainsonii* and Conservation Advice for *Polytelis swainsonii* superb parrot
- Conservation Advice for Callocephalon fimbriatum (Gang-gang Cockatoo)

- Conservation Advice Aprasia parapulchella Pink-tailed worm-lizard
- Conservation Advice for Synemon plana (Golden Sun Moth).

The mitigation measures have also been developed to ensure they are not inconsistent with the relevant threat abatement plans (TAPs). In particular, the mitigation measures will ensure the Proposed Action:

- Does not result in an increase in rabbit numbers within the Disturbance Footprint in accordance with the Threat Abatement Plan for Competition and Land Degradation by Rabbits
- Does not result in any actions that would cause an increase in feral pigs in accordance with the Threat Abatement Plan for Predation, Habitat Degradation, Competition, and Disease Transmission by Feral Pigs (*Sus scrofa*)
- Results in a reduction in the spread of weeds and pathogens such as *Phytophthora cinnamomi* in accordance with the Threat Abatement Plan for Disease in Natural Ecosystems caused by *Phytophthora cinnamomi*.

The mitigation measures will also ensure that the Proposed Action does not result in an increase in the spread of cane toads in accordance with the Threat Abatement Plan for the Biological Effects, including Lethal Toxic Ingestion, caused by Cane Toads. It is noted however, that the Proposed Action Area is several hundred kilometres from the predicted area of occurrence of the cane toad, as identified in the TAP, thus cane toads are not considered to pose a particular risk to the Proposed Action. This TAP has been considered as it is identified as relevant to BGW.

Table 6.1 of the BAR (**Attachment F**) details the specific measures that will be implemented to mitigate and manage biodiversity impacts. The measures will be documented in a CEMP and include:

- Demarcation of approved clearance boundaries and avoidance areas
- Fencing and access control
- Pest plant and animal management
- Phytophthora cinnamomi management
- Erosion and sediment control
- Noise and vibration management
- Site rehabilitation.

The person and/or entity responsible for implementing these mitigation measures will be designated in the CEMP. The CEMP and relevant sub-plans will be adaptive, with the effectiveness of the control measures monitored continuously to identify opportunities for improvement.

The overall effectiveness of control measures to achieve the desired biodiversity outcomes is considered high, as the measures are largely linked to standard construction management requirements, such as site access control and soil and weed management. Salvage prior to or during construction for fauna and hollow-bearing trees is frequently undertaken in the ACT, and standard procedures are available to ensure these activities are undertaken in an effective manner.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The Proponent is currently investigating offset options for superb parrot and gang-gang cockatoo in consultation with the ACT Government's Offsets Team. A Biodiversity Offset Strategy would be provided as part of any future assessment report that may be required under the EPBC Act.

4.1.5 Migratory Species

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You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name	
No	No	Actitis hypoleucos	Common Sandpiper	
No	No	Apus pacificus	Fork-tailed Swift	
No	No	Ardenna carneipes	Flesh-footed Shearwater, Fleshy-footed Shearwater	
No	No	Ardenna grisea	Sooty Shearwater	
No	No	Balaenoptera bonaerensis	Antarctic Minke Whale, Dark-shoulder Minke Whale	
No	No	Balaenoptera borealis	Sei Whale	
No	No	Balaenoptera edeni	Bryde's Whale	
No	No	Balaenoptera musculus	Blue Whale	
No	No	Balaenoptera physalus	Fin Whale	
No	No	Calidris acuminata	Sharp-tailed Sandpiper	
No	No	Calidris canutus	Red Knot, Knot	
No	No	Calidris ferruginea	Curlew Sandpiper	
No	No	Calidris melanotos	Pectoral Sandpiper	
No	No	Calidris ruficollis	Red-necked Stint	
No	No	Caperea marginata	Pygmy Right Whale	
No	No	Carcharhinus longimanus	Oceanic Whitetip Shark	
No	No	Carcharias taurus	Grey Nurse Shark	
No	No	Carcharodon carcharias	White Shark, Great White Shark	

Direct impact	Indirect impact	Species	Common name	
No	No	Caretta caretta	Loggerhead Turtle	
No	No	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover	
No	No	Chelonia mydas	Green Turtle	
No	No	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth	
No	No	Diomedea antipodensis	Antipodean Albatross	
No	No	Diomedea epomophora	Southern Royal Albatross	
No	No	Diomedea exulans	Wandering Albatross	
No	No	Diomedea sanfordi	Northern Royal Albatross	
No	No	Eubalaena australis	Southern Right Whale	
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe	
No	No	Hirundapus caudacutus	White-throated Needletail	
No	No	Isurus oxyrinchus	Shortfin Mako, Mako Shark	
No	No	Lagenorhynchus obscurus	Dusky Dolphin	
No	No	Lamna nasus	Porbeagle, Mackerel Shark	
No	No	Limosa lapponica	Bar-tailed Godwit	
No	No	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel	
No	No	Macronectes halli	Northern Giant Petrel	
No	No	Megaptera novaeangliae	Humpback Whale	
No	No	Motacilla flava	Yellow Wagtail	
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew	
No	No	Orcinus orca	Killer Whale, Orca	
No	No	Phoebetria fusca	Sooty Albatross	
No	No	Physeter macrocephalus	Sperm Whale	
No	No	Rhincodon typus	Whale Shark	
No	No	Sternula albifrons	Little Tern	
No	No	Thalassarche bulleri	Buller's Albatross, Pacific Albatross	

Direct impact	Indirect impact	Species	Common name	
No	No	Thalassarche carteri	Indian Yellow-nosed Albatross	
No	No	Thalassarche cauta	Shy Albatross	
No	No	Thalassarche chrysostoma	Grey-headed Albatross	
No	No	Thalassarche eremita	Chatham Albatross	
No	No	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross	
No	No	Thalassarche melanophris	Black-browed Albatross	
No	No	Thalassarche salvini	Salvin's Albatross	
No	No	Thalassarche steadi	White-capped Albatross	
No	No	Tringa nebularia	Common Greenshank, Greenshank	

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.5.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The white-throated needletail (*Hirundapus caudacutus*) is the only EPBC Act listed migratory species that has a moderate or higher likelihood of occurrence in the Proposed Action Area. However, the species is considered unlikely to interact with habitat in the Proposed Action Area as it is primarily aerial and highly mobile, thus no direct impacts have been considered for this migratory species.

Collision with overhead powerlines and associated infrastructure can be a source of mortality for some aerial species. White-throated needletail is predominantly aerial and highly mobile and is at a constant risk of collision with overhead powerlines when in Australia, however collision with transmission lines would affect only a few individuals and is not a threat to the overall viability of the species.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action is not a nuclear action.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action is not located in or near a Commonwealth marine area.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

*

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

The Proposed Action Area is located more than 1,200 km from the Great Barrier Reef Marine Park and no direct or indirect impacts are expected.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action is not a large coal mining development, or related to coal seam gas, and would not involve any mining activities that would have an impact on a water resource.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.10.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

There is no Commonwealth land within the Proposed Action Area. Some areas of Commonwealth land are within 10 km of the Proposed Action, but given the nature and scale of the Proposed Action, it is not expected to result in any direct or indirect impacts on Commonwealth land.

Commonwealth land (owned by the Department of Finance) is located in NSW adjacent to the Proposed Action Area and would be impacted by the larger action. These impacts are considered in the referral relating to the NSW portion of the Proposed Action and are not considered further in this referral.

4.1.10.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.10.6 Describe why you do not consider this to be a Significant Impact. *

No Commonwealth land is located within the Proposed Action Area. Given the nature and scale of the Proposed Action, it is not expected to result in any direct or indirect impacts on nearby Commonwealth land.

4.1.10.7 Do you think your proposed action is a controlled action? *

No

4.1.10.9 Please elaborate why you do not think your proposed action is a controlled action. *

No Commonwealth land is located within the Proposed Action Area. Given the nature and scale of the Proposed Action, it is not expected to result in any direct or indirect impacts on nearby Commonwealth land.

4.1.10.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

No measures have been proposed as there is no Commonwealth land within the Proposed Action Area. Given the nature and scale of the Proposed Action, it is also not expected to result in any direct or indirect impacts on nearby Commonwealth land.

However, the Proposed Action will implement a CEMP to ensure indirect impacts do not occur on any adjacent land or environmental values during construction. Potential indirect impacts will be managed through the implementation of the following measures:

- Demarcation of approved clearance boundaries and avoidance areas
- Fencing and access control
- Pest plant and animal management
- Erosion and sediment control
- Dust control
- Noise and vibration management.

Table 6.1 of the BAR (**Attachment F**) details the specific measures that will be implemented to mitigate and manage biodiversity impacts.

4.1.10.11 Please describe any proposed offsets and attach any supporting documentation

relevant to these measures. *

No offsets have been proposed as there is no Commonwealth land within the Proposed Action Area. Given the nature and scale of the Proposed Action, it is also not expected to result in any direct or indirect impacts on nearby Commonwealth land.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action is in inland Australia and would therefore not impact any Commonwealth heritage places overseas.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

• Threatened Species and Ecological Communities (S18)

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

4.3.8 Describe why alternatives for your proposed action were not possible. *

The location and design of the proposed transmission line realignment has been developed through an iterative options analysis process over several years, to reduce environmental, cultural and social impacts of the Proposed Action.

Five sub-options were initially considered for the new alignments. All sub-options other than the Proposed Action (as assessed in this referral) were rejected due to cultural impacts associated with the Molonglo and Murrumbidgee River corridors, and visual/social impacts on the Lower Molonglo Water Quality Control Centre and Shepherds lookout (which is a popular bushwalking location known for its scenic views over the Murrumbidgee River).

Micrositing was also undertaken to inform the final Disturbance Footprint as discussed in **Section 4** of this referral, based on detailed ecological and Aboriginal heritage mapping.

As a result, the Proposed Action Area has been refined over years of planning and consultation and no suitable alternatives remain.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Туре	Name	Date	Sens	itivi G onfidence
#1.	Docum	enAttachment A - Figures.pdf Provides the figures/maps that are cross-referenced in this referral.	27/10/2	0 2N a	High
#2.	Docum	enAttachment B - Land parcels in the Proposed Action Area.pdf Provides the list of land parcels on which the Proposed Action is located, based on ACTmapi data.	27/10/2	0 24 0	High

1.2.5 Information about the staged development

	Туре	Name	Date	Sensit	tivi G onfidence
#1.	Docum	enAttachment C - Impacts of the larger action.pdf Details potential impacts on MNES that may occur as a result of the larger action.	27/10/2	02146	High

1.2.7 Public consultation regarding the project area

	Type Name	Date	Sens	itivi G onfidence
#1.	DocumenAttachment D - Summary of community and stakeholder engagement.pdf	27/10/2	20 2N a	High
	Outlines the community and stakeholder engagement			

1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

	Туре	Name	Date	Sens	itivi G onfidenc
#1.	#1. DocumerAttachment E - Ginninderry Project Vision.pdf Provides the GJV's vision statement for the Ginninderry		27/10/2	20 2N a	High
		residential development project.			

3.2.1 Flora and fauna within the affected area

	Туре	Name	Date	Sensi	itivi G onfidence
#1.	Docum	erAttachment F - Biodiversity Assessment Report.pdf Details the biodiversity assessment undertaken by Umwelt for the Proposed Action	27/10/2	0 24 b	High

3.3.2 Indigenous heritage values that apply to the project area

	Туре	Name	Date	Sensi	tivi G onfidenc
#1.	Docum	enAttachment G - Cultural Heritage Assessment - redacted.pdf Details the cultural heritage assessment undertaken by Past Traces for the larger action and is relevant to the Proposed Action. This is a redacted version which can be provided for public exhibition of the referral.	27/10/2	0 2%	High
#2.	Docum	enAttachment G - Cultural Heritage Assessment.pdf Details the cultural heritage assessment undertaken by Past Traces for the larger action and is relevant to the Proposed Action. A redacted version has been provided for public exhibition of the referral.	27/10/2	0244es	High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

	Туре	Name	Date	Sensi	itivi G onfidenc
#1.	Docum	enAttachment H - Significant impact assessments.pdf Provides the most up-to-date significant impact assessments for EPBC Act listed threatened species and communities that could be impacted by the Proposed Action.	27/10/2	0 24 b	High

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	18059519041
Organisation name	UMWELT (AUSTRALIA) PTY. LTD.
Organisation address	Unit 3 2/6 Shea St, Phillip ACT 2606
Representative's name	Alexander Garrett
Representative's job title	Senior Environmental Scientist
Phone	+61449253999
Email	alexander.garrett@umwelt.com.au
Address	Unit 3 2/6 Shea St, Phillip ACT 2606

Check this box to indicate you have read the referral form. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

By checking this box, I, **Alexander Garrett of UMWELT (AUSTRALIA) PTY. LTD.**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	165870539
Organisation name	RIVERVIEW PROJECTS (ACT) PTY LIMITED
Organisation address	PO Box 3908, Manuka ACT 2603
Representative's name	David Maxwell
Representative's job title	Managing Director

Phone	0404 829 048
Email	jessica@ginninderry.com
Address	The Link, 1 McClymont Way, Strathnairn ACT 2615

Check this box to indicate you have read the referral form. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

I, David Maxwell of RIVERVIEW PROJECTS (ACT) PTY LIMITED, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

Check this box to indicate you have read the referral form. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

I, **David Maxwell of RIVERVIEW PROJECTS (ACT) PTY LIMITED**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

I would like to receive notifications and track the referral progress through the EPBC portal. *